AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A structured data receiving apparatus receiving a plurality of fragment data constituting a structured data having a tree structure described in an extensible markup language and a plurality of fragment data configuration information, created one for each fragment data, to concatenate said plurality of fragment data into the structured data stored in a receiving side and having a tree structure,

each piece of fragment data configuration information including reference information having identification information identifying corresponding fragment data from said plurality of fragment data and position information on a connection position of the corresponding fragment data in the structured data, said structured data receiving apparatus comprising:

receiving means for receiving the fragment data and the fragment data configuration information and outputting them;

fragment data storing means for storing the fragment data output from said receiving means;

structured data storing means for storing the structured data; and

structured data concatenating means for concatenating predetermined fragment data, read from said fragment data storing means, into the structured data read from said structured data storing means, based on the position information and the reference information included in the fragment data configuration information output from said receiving means.

2. (Original) The structured data receiving apparatus according to claim 1,

wherein said position information is position information having information specifying a node in the structured data and information specifying a connection position of the corresponding fragment data in relation to the specified node.

3. (Currently Amended) The structured data receiving apparatus according to claim 2,

wherein the information specifying the connection position of the corresponding fragment data in relation to the specified node is

either information specifying a position, which is at the same level of hierarchy as that of the specified node in relation to a node that is one higher level higher of hierarchy than that of the specified node and which immediately precedes the specified node, as the connection position of a highest level node of the corresponding fragment data,

or information specifying a position, which is a position at one lower level lower of hierarchy than that of the specified node and which is the last node at the lower level, as the connection position of the highest level node of the corresponding fragment data.

4. (Original) The structured data receiving apparatus according to claim 1,

wherein the reference information has information on contents of the corresponding fragment data and

wherein said structured data concatenating means concatenates the fragment data into the structured data, said fragment data being determined to be concatenated based on the information on the contents.

5. (Currently Amended) The structured data receiving apparatus according to claim 1,

wherein the reference information includes information on a name of a highest <u>level</u> node of the corresponding fragment data and

wherein said structured data concatenating means processes the position information based on the information on the name of the highest <u>level</u> node.

6. (Currently Amended) The structured data receiving apparatus according to claim 1,

wherein the fragment <u>data</u> configuration information has information on a method for processing the fragment data

wherein, for a part of the fragment data, fragment update data is received instead of the fragment <u>data</u> configuration information corresponding to the fragment data, said fragment update data being created by adding the information on the fragment data processing method and the position information on a connection position in the structured data to the fragment data,

wherein said receiving means receives the fragment data, the fragment <u>data</u> configuration information, and the fragment update data and outputs them and

wherein, based on the information on the processing method included in the fragment update data output from said receiving means, said structured data concatenating means also has

a function that concatenates the fragment data, included in the fragment update data, into the structured data.

7. (Currently Amended) A structured data receiving apparatus receiving a plurality of fragment data constituting a structured data having a tree structure described in an extensible markup language and a plurality of fragment data configuration information, created one for each fragment data, to concatenate said plurality of fragment data into the structured data stored in a receiving side and having a tree structure,

each piece of fragment data configuration information including reference information having location information on a location of corresponding fragment data and position information on a connection position of the corresponding fragment data in the structured data, said structured data receiving apparatus comprising:

fragment data configuration information receiving means for receiving the fragment data configuration information and outputting it;

fragment data receiving means for identifying the location of the fragment data, based on the reference information included in the fragment data configuration information output from said fragment data configuration information receiving means, and for receiving the fragment data from the identified location and outputting it;

structured data storing means for storing the structured data; and

structured data concatenating means for concatenating the fragment data, acquired by said fragment data receiving means, into the structured data read from said structured data

storing means, based on the position information included in the fragment <u>data</u> configuration

information output from said fragment <u>data</u> configuration information receiving means.

8. (Original) The structured data receiving apparatus according to claim 7,

wherein said position information is position information having information specifying a

node in the structured data and information specifying a connection position of the

corresponding fragment data in relation to the specified node.

9. (Currently Amended) The structured data receiving apparatus according to claim 8,

wherein the information specifying the connection position of the corresponding

fragment data in relation to the specified node is

either information specifying a position, which is at the same level <u>of hierarchy</u> as that of

the specified node in relation to a node that is one <u>higher</u> level <s>higher</s> <u>of hierarchy</u> than that of

the specified node and which immediately precedes the specified node, as the connection

position of a highest <u>level</u> node of the corresponding fragment data,

or information specifying a position, which is a position at one <u>lower</u> level <s>lower</s> <u>of</u>

<u>hierarchy</u> than that of the specified node and which is the last node at the lower level, as the

connection position of the highest <u>level</u> node of the corresponding fragment data.

10. The structured data receiving apparatus according to claim 7,

wherein the reference information has information on contents of the corresponding

fragment data and

wherein said structured data concatenating means concatenates the fragment data into the

structured data, said fragment data being determined to be concatenated based on the information

on the contents.

11. (Currently Amended) The structured data receiving apparatus according to claim 7,

wherein the reference information includes information on a name of a highest level node

of the corresponding fragment data and

wherein said structured data concatenating means processes the position information

based on the information on the name of the highest level node.

12. (Currently Amended) A structured data receiving method of receiving a plurality of fragment

data constituting a structured data having a tree structure described in an extensible markup

language and a plurality of fragment data configuration information, created one for each

fragment data, to concatenate said plurality of fragment data in a receiving side to generate the

structured data having a tree structure,

each piece of fragment data configuration information including reference information

having identification information identifying corresponding fragment data from said plurality of

fragment data and position information on a connection position of the corresponding fragment

data in the generated structured data,

said structured data receiving method comprising the step of concatenating the received

fragment data to generate the structured data, based on the position information and the reference

information included in the received fragment <u>data</u> configuration information.

13. (Currently Amended) A structured data receiving method of receiving a plurality of fragment

data <u>constituting a structured data having a tree structure described in an extensible markup</u>

<u>language</u> and a plurality of fragment <u>data</u> configuration information, created one for each

fragment data, to concatenate said plurality of fragment data in a receiving side to generate <u>the</u>

structured data stored <s>having a tree structure,</s>

each piece of fragment <u>data</u> configuration information including reference information

having location information on a location of corresponding fragment data and position

information on a connection position of the corresponding fragment data in the generated

structured data,

said structured data receiving method comprising the step of concatenating the received

fragment data to generate the structured data, based on the position information and the reference

information included in the received fragment <u>data</u> configuration information.

14. (Currently Amended) A <u>computer readable storage medium storing a</u> structured data

receiving program causing a computer to function as a receiving apparatus receiving a plurality

of fragment data <u>constituting a structured data having a tree structure described in an extensible</u>

<u>markup language</u> and a plurality of fragment <u>data</u> configuration information, created one for each

fragment data, to concatenate said plurality of fragment data into the structured data stored in a receiving side ~~and having a tree structure~~,

each piece of fragment data configuration information including reference information having identification information identifying corresponding fragment data from said plurality of fragment data and position information on a connection position of the corresponding fragment data in the structured data, said ~~structured data receiving program~~ computer readable medium comprising:

a receiving function for receiving the fragment data and the fragment data configuration information and outputting them; and

a structured data concatenating function for concatenating the received fragment data into the structured data based on the position information and the reference information included in the received fragment data configuration information.

15. (Currently Amended)A computer readable medium storing a structured data receiving program causing a computer to function as a receiving apparatus receiving a plurality of fragment data constituting a structured data having a tree structure described in an extensible markup language and a plurality of fragment data configuration information, created one for each fragment data, to concatenate said plurality of fragment data into the structured data stored in a receiving side ~~and having a tree structure~~,

each piece of fragment data configuration information including reference information having location information on a location of corresponding fragment data and position

information on a connection position of the corresponding fragment data in the structured data,

said ~~structured data receiving program~~ computer readable medium comprising:

a fragment data configuration information receiving function for receiving the fragment

data configuration information and outputting it;

a fragment data receiving function for identifying the location of the fragment data, based

on the reference information included in the received fragment data configuration information

and for receiving the fragment data from the identified location and outputting it; and

a structured data concatenating function for concatenating the received fragment data into

the structured data, based on the position information included in the received fragment data

configuration information.

16. (Currently Amended) A structured data transmitting apparatus transmitting a plurality of

fragment data constituting a structured data having a tree structure described in an extensible

markup language and a plurality of fragment data configuration information, created one for each

fragment data, to concatenate said plurality of fragment data in a receiving side to generate the

structured data ~~having a tree structure~~,

each piece of fragment data configuration information including reference information

having identification information identifying corresponding fragment data from said plurality of

fragment data and position information on a connection position of the corresponding fragment

data in the generated structured data, said structured data transmitting apparatus comprising:

transmitting means for transmitting a data stream generated by arranging the fragment

data and the fragment <u>data</u> configuration information one after another.

17. (Original) The structured data transmitting apparatus according to claim 16,

wherein said position information is position information having information specifying a

node in the structured data and information specifying a connection position of the

corresponding fragment data in relation to the specified node.

18. (Currently Amended) The structured data transmitting apparatus according to claim 17,

wherein the information specifying a connection position of the corresponding fragment

data in relation to the specified node is

either information specifying a position, which is at the same level <u>of hierarchy</u> as that of

the specified node in relation to a node that is one <u>higher</u> level <s>higher</s> <u>of hierarchy</u> than that of

the specified node and which immediately precedes the specified node, as the connection

position of a highest <u>level</u> node of the corresponding fragment data,

or information specifying a position, which is a position at one <u>lower</u> level <s>lower</s> <u>of</u>

<u>hierarchy</u> than that of the specified node and which is the last node at the lower level, as the

connection position of the highest <u>level</u> node of the corresponding fragment data.

19. (Original) The structured data transmitting apparatus according to claim 16,

wherein the reference information has information on contents of the corresponding

fragment data.

20. (Currently Amended) The structured data transmitting apparatus according to claim 16,

wherein the reference information includes information on a name of a highest <u>level</u> node

of the corresponding fragment data.

21. (Currently Amended) The structured data transmitting apparatus according to claim 16,

wherein the fragment <u>data</u> configuration information has information on a method for

processing the fragment data,

further comprising fragment update data generating means for generating, for a part of

the fragment data, fragment update data instead of the fragment <u>data</u> configuration information

corresponding to the fragment data, said fragment update data being created by adding the

information on the fragment data processing method and the position information on a

connection position in the structured data to the fragment data,

wherein said transmitting means transmits a data stream generated by arranging the

fragment data, the fragment <u>data</u> configuration information, and the fragment update data, one

after another.

22. (Currently Amended) A structured data transmitting apparatus transmitting a plurality of

fragment data <u>constituting a structured data having a tree structure described in an extensible</u>

markup language and a plurality of fragment <u>data</u> configuration information, created one for each

fragment data, to concatenate said plurality of fragment data in a receiving side to generate <u>the</u>

structured data ~~having a tree structure~~,

each piece of fragment <u>data</u> configuration information including reference information

having location information on a location of corresponding fragment data and position

information on a connection position of the corresponding fragment data in the structured data,

said structured data transmitting apparatus comprising:

transmitting means that, when any of the fragment data or all the fragment <u>data</u>

configuration information is requested by the receiving side, transmits the requested fragment

data or the requested all the fragment <u>data</u> configuration information to the receiving side.

23. (Original) The structured data transmitting apparatus according to claim 22,

wherein said position information is position information having information specifying a

node in the structured data and information specifying a connection position of the

corresponding fragment data in relation to the specified node.

24. (Currently Amended) The structured data transmitting apparatus according to claim 23,

wherein the information specifying a connection position of the corresponding fragment

data in relation to the specified node is

either information specifying a position, which is at the same level <u>of hierarchy</u> as that of

the specified node in relation to a node that is one <u>higher</u> level ~~higher~~ <u>of hierarchy</u> than that of

the specified node and which immediately precedes the specified node, as the connection

position of a highest <u>level</u> node of the corresponding fragment data,

or information specifying a position, which is a position at one <u>lower</u> level ~~lower~~ <u>of</u>

<u>hierarchy</u> than that of the specified node and which is the last node at the lower level, as the

connection position of the highest <u>level</u> node of the corresponding fragment data.

25. (Original) The structured data transmitting apparatus according to claim 22,

wherein the reference information has information on contents of the corresponding

fragment data.

26. (Currently Amended) The structured data transmitting apparatus according to claim 22,

wherein the reference information includes information on a name of a highest <u>level</u> node

of the corresponding fragment data.

27. (Currently Amended) A structured data transmitting method of transmitting a plurality of

fragment data <u>constituting a structured data having a tree structure described in an extensible</u>

<u>markup language</u> and a plurality of fragment <u>data</u> configuration information, created one for each

fragment data, to concatenate said plurality of fragment data in a receiving side to generate <u>the</u>

structured data ~~having a tree structure~~,

each piece of fragment <u>data</u> configuration information including reference information

having identification information identifying corresponding fragment data from said plurality of

fragment data and position information on a connection position of the corresponding fragment

data in the generated structured data,

said structured data transmitting method comprising the step of transmitting a data stream

generated by arranging the fragment data and the fragment data configuration information, one

after another.

28. (Currently Amended) A structured data transmitting method of transmitting a plurality of

fragment data constituting a structured data having a tree structure described in an extensible

markup language and a plurality of fragment data configuration information, created one for each

fragment data, to concatenate said plurality of fragment data in a receiving side to generate the

structured data having a tree structure,

each piece of fragment data configuration information including reference information

having location information on a location of corresponding fragment data and position

information on a connection position of the corresponding fragment data in the generated

structured data,

said structured data transmitting method comprising the step of, in response to a request

for one of the fragment data or all the fragment data configuration information from the

receiving side, transmitting the requested fragment data or the requested all the fragment data

configuration information to the receiving side.